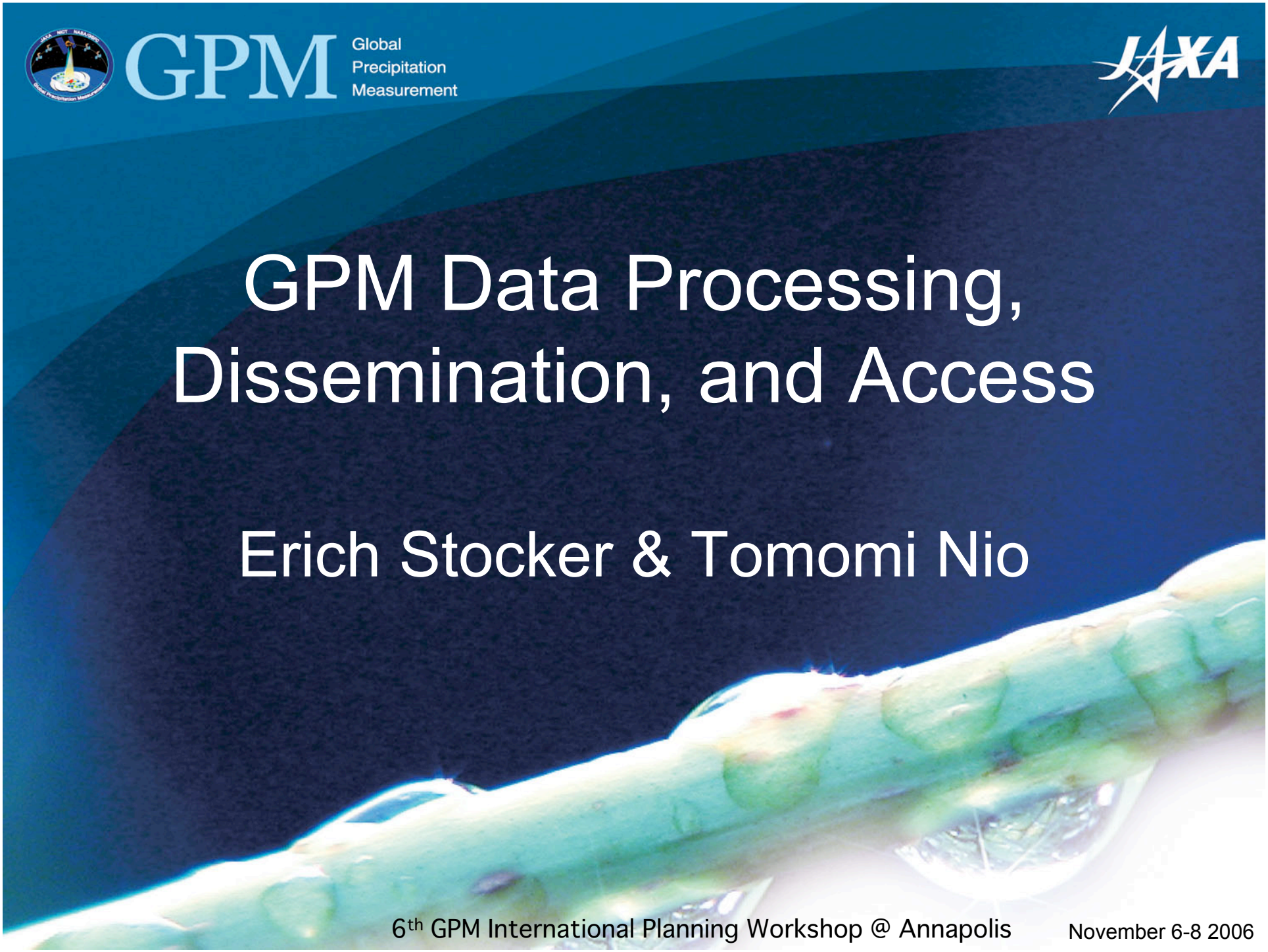

GPM Data Processing, Dissemination, and Access

Erich Stocker & Tomomi Nio

Requirement

- GPM mission data delivered to users
  - Timely
  - High availability
  - Cost effective
  - Easy access
  - Easy processing (software / toolkit)

Our group doesn't matter policy issue and scientific requirements.

Requirement - example -

- Japan
  - Produce multi-MWR precipitation observation product and conduct near-real-time data processing/dissemination ~2.5 hrs after observation.
- NPOESS
  - Latency: 95% of processed data delivered in 28 minutes.

Processing

- Collecting
  - L1B
- Distribution
  - L1C
  - L2
  - L3
- Data system
  - Format
  - Software, Toolkit

Dissemination

- NASA/JAXA
  - TDRSS
  - Network
    - APAN / GEANT / Abiline
- WMO / EUMETSAT / NOAA / JMA / …
  - Satellite
    - RARS
    - ADM
    - GEONetcast
  - Network
    - GTS

Access

- Internet
  - Web service
  - FTP, SFTP
- User Type
  - Partners
  - General users

Reference chart of GPM constellation

- Satellite
- Launch Date, Mission Life
- Orbit (Inclination, local time, Altitude, Observation Frequency/Recycle time?)
- Data Receiving (Station)
  - Station (X-band/S-band), Real-time / Stored
  - TDRSS
- Sensor
  - Type (MW radiometer/ MW Sounder)
  - Band (GHz)
  - Pixel size / resolution
  - Swath
- Requirement
  - Availability, Latency
- Data Processing
  - Processing Center
  - Toolkit, Software
  - Data Format
- User services
  - Web-download
  - Direct capture
- Data Policy (*)
  - Open / Limitation
- Other info.
  - Home Page
  - Workshop
  - Contact Person

Reference chart of GPM constellation – example of GCOM-W1 (1/2)-

- Satellite, Agency
  - GCOM-W(Global Changing Observation Mission-W), JAXA
- Launch Date, Mission Life
  - Feb 2011, 5 years
- Orbit (Inclination, local time, Altitude, Observation Frequency/Recycle time?)
  - Sun-synchronous, 98.19deg, 13:30, 699.6km, 100min
- Mission Data Receiving (Station)
  - Station (X-band/S-band), Real-time / Stored
    - Hatoyama EOC(X) for real-time, Svalbard (X) for stored data
- Sensor
  - Type (MW radiometer/ MW Sounder)
    - Advanced Microwave Scanning Radiometer – 2 (MWR)
  - Band (GHz) 6band (6.925, 10.65, 18.7, 23.8, 36.5, 89.0GHz)
  - Pixel size / resolution
  - Swath 1450km

Reference chart of GPM constellation – example of GCOM-W1 (2/2)-

- Requirement
  - Availability, Latency
    - Japan Area : 30min 80%
    - Global : 2.5hours 70%
- Data Processing
  - Processing Center JAXA/TKSC
  - Toolkit, Software TBD
  - Data Format HDF5
- User services
  - Web-download TBD
  - Direct Broadcast TBD
- Data Policy
  - Open / Limitation TBD
- Other info.
  - Home Page
  - Workshop
  - Contact Person

GDaWG meeting

- Propose to hold the 3rd GDaWG meeting
  - 1st : Feb. 2002 @ Maryland, US
  - 2nd: Feb 2003 @ Tokyo, Japan
  - 3rd: Around the same time as 7th GPM International Planning Workshop
- Expecting participation:
  - Data providers
  - User Agencies
- Purpose:
  - To confirm and update the chart
  - To exchange status and information